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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,527	07/16/2003	James C. Clark	Clark 1-10-9-24-1	8959

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EXAMINER

LE, DIEU MINH T

ART UNIT PAPER NUMBER

2114

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/620,527	Applicant(s) CLARK ET AL.	
	Examiner Dieu-Minh Le	Art Unit 2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This Office Action is response to the communication filed on 03/08/04 in application 10/620,527.
2. Claims 1-30 are presented for examination.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 12, line 3; claim 13, line 1 "said step of performing" lacks antecedent basis. Does Applicant means "said means of performing?" since claim 11 is a system claim.

Clarification is required.

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As per claims 15-17, line 1, "said identifying step" lacks antecedent basis. Does Applicant means "said identifying means?" since claim 11 is a system claim. Clarification is required.

As per claims 19-20, line 1, "comparing step" lacks antecedent basis. Does Applicant means "comparing means?" since claim 11 is a system claim. Clarification is required.

As per claim 21, lines 3, 6, 8 & 10 --means for-- needs to be removed [redundancy].

As per claims 22-30, "said ...step... " needs to change to - said ... means... -- [same problem as per claims 12-20 above].

Clarification is required.

**Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-30 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 20, Applicant claims "Acomputer program product ... readable medium...", not having computer instructions being

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executed by a computer. A computer program, not having computer instructions being executed by a computer or without the computer-readable medium needed to realize the computer program's functionality, is nonstatutory functional descriptive material [See MPEP 2106]. The examiner recommends that if the applicant is trying claim a product claim, the following example is suggest:

(A machine readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a machine, cause the machine to perform detecting silent failures with subsets of instructions in a system...)

Appropriate correction is required.

**Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasper, II et al. (U.S. 2004/0057536 hereafter referred to as Kasper) in view of Kanekawa et al. (U.S. Patent 6,513,131 hereafter referred to as Kanekawa).

As per claim 1:

Kasper explicitly teach the invention. Kasper teaches:

- A method for detecting failures in a system [abstract, fig. 1-3, col. 1, par. 0005, col. 7, claim 19] comprising the steps of:
  - identifying an operational signature of said system, said operational signature being representative of the system when it is operating properly [col. 6, claim 1; col. 7, claim 19 and claim 29; col. 2, par. 0016-0017];
  - obtaining samples of operational service measurements [col. 6, claim 1; col. 7, claim 19 and claim 29; col. 2, par. 0016-0017];

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- comparing said samples with said operational signature [col. 1, par. 0008; col. 2, par. 0014-0017];
- performing a corrective measure if said comparison of said samples with said operational signature [col. 1, par. 0005; col. 2, par. 0014-0017; col. 6, par. 0039].

Kasper does not explicitly teach:

- detecting silent failures in a system.

However, Kasper does disclose capability of:

- A detecting and correlating of signatures of communication devices/systems [abstract, fig. 1-3, col. 1, par. 0001, 0005, 0016-0017] comprising capabilities of:
  - ***detecting failure of electronics devices or communication system via signatures comparison, indexing, measuring probability*** [col.2, par. 0014-0017].

In addition, Kanekawa does explicitly disclose:

- A logic circuit error detection and correction in supporting the system reliability process [abstract, fig. 22, col. 1, lines 10-20] comprising
  - ***silent failure detection in supporting the system reliability process*** [col. 22, lines 27-58].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made first, to realize that the Kasper's ***detecting failure of electronics devices or communication system via signatures comparison, indexing, measuring probability*** capability does perform such Applicant's detecting silent failures in a system limitation. This is because Kasper clearly applied these pattern signatures for testing configuration, comparison, simulation, evaluation, performance in determining whether the system functioned properly; second, by applying the capability of ***silent failure detection in supporting the system reliability process*** as taught by Kanekawa in conjunction with the detecting and correlating of signatures of communication devices/systems as taught by Kasper, the computer/communication data processing system, more specifically a silent failure detection system can enhance its operation performance, more specifically to ensuring the error thoroughly detected and corrected via signature comparison process.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the computer/communication system operation availability and network/system performance therein with a mechanism to enhance the data connectivity, data debugging, data

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displaying, data reliability, and data throughput which eventually will increase its performance, such as data throughput between internal and external devices.

As per claim 2:

Kasper further teaches:

- embedded processor used for signature comparison [col. 1, 0002 and col. 2, par. 0014];
- comparing said samples with said operational signature [col. 1, par. 0008; col. 2, par. 0014-0017];
- performing a corrective measure if said comparison of said samples with said operational signature [col. 1, par. 0005; col. 2, par. 0014-0017; col. 6, par. 0039].

Kasper does not explicitly teach:

- one active unit (AU) and one standby unit (SU) used for comparison.

However, Kasper does disclose capability of:

- A detecting and correlating of signatures of communication devices/systems [abstract, fig. 1-3, col. 1, par. 0001, 0005, 0016-0017] comprising capabilities of:

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- *detecting failure of electronics devices or communication system via signatures comparison, indexing, measuring probability* [col.2, par. 0014-0017].

In addition, Kanekawa does explicitly disclose:

- A logic circuit error detection and correction in supporting the system reliability process [abstract, fig. 22, col. 1, lines 10-20] comprising

- computer devices/resources redundancies including processors, active/standby units in supporting the silent failure detection in supporting the system reliability process [col. 3, lines 6-34; col. 11, lines 43-59; col. 14, lines 42-48; and col. 22, lines 27-58].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the Kanekawa's computer devices/resources redundancies including processors, active/standby units in conjunction with the detecting and correlating of signatures of communication devices/systems as taught by Kasper in supporting the silent failure detection in supporting the system reliability process. By utilizing this approach, the computer/communication data

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processing system, more specifically a silent failure detection system can enhance its operation performance.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the computer/communication system operation availability and network/system performance therein with a mechanism to enhance the data connectivity, data debugging, data displaying, data reliability, and data throughput.

As per claims 3-4:

Kasper further teaches:

- automatically initiating an alert (i.e., status, association, event, etc...) indicating that a silent failure of said system is probable [col. 2, par. 0014-0016; col. 4, par. 0029];
- alert process comprises automatically communicating with a technician (i.e., user input/interactively) electronically [col. 3, par. 0018];

In addition, Kanekawa does explicitly disclose:

- A logic circuit error detection and correction in supporting the system reliability process [abstract, fig. 22, col. 1, lines 10-20] comprising

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- computer devices/resources redundancies including processors, active/standby units in supporting the silent failure detection in supporting the system reliability process [col. 3, lines 6-34; col. 11, lines 43-59; col. 14, lines 42-48; and col. 22, lines 27-58].

As per claim 5:

Kasper explicitly teach the invention. Kasper teaches:

- monitoring said system during an index period to obtain a set of index service measurements; evaluating said index service measurements and determining said operational signature based on said index service measurements (i.e., checking, comparing, testing, declaring, clearing, determining, etc... [col. 2, par. 0014-0017; col. 6, claims 1-11] ;
- index service measurements are updated at predetermined times to incorporate said operational service measurements therein [col. 6, claim 1; col. 7, claim 19 and claim 29; col. 2, par. 0016-0017].

As per claims 6-8:

Kasper explicitly teach the invention. Kasper teaches:

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- monitoring said system during an index period to obtain a set of index service measurements; evaluating said index service measurements and determining said operational signature based on said index service measurements (i.e., checking, comparing, testing, declaring, clearing, determining, etc... [col. 2, par. 0014-0017; col. 6, claims 1-11] ;
- index service measurements are updated at predetermined times to incorporate said operational service measurements therein [col. 6, claim 1; col. 7, claim 19 and claim 29; col. 2, par. 0016-0017].

Kasper does not explicitly teach:

- system is and is not actively online.

However, Kasper does disclose capability of:

- A detecting and correlating of signatures of communication devices/systems [abstract, fig. 1-3, col. 1, par. 0001, 0005, 0016-0017] comprising capabilities of:
  - ***detecting failure of electronics devices or communication system via signatures comparison, indexing, measuring probability*** [col.2, par. 0014-0017] via wireless

communications including keystrokes, reset, failure detection, etc... [col. 2, par. 0002].

In addition, Kanekawa does explicitly disclose:

- A logic circuit error detection and correction in supporting the system reliability process [abstract, fig. 22, col. 1, lines 10-20] comprising
- silent failure detection in supporting the system reliability process via online transaction processor [col. 3, lines 22-34].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made first, to realize that the Kasper's **detecting failure of electronics devices or communication system via signatures comparison, indexing, measuring probability** [col.2, par. 0014-0017] via wireless communications including keystrokes, reset, failure detection, etc... capability does perform such Applicant's "system is and is not actively online" limitation. This is because Kasper easily performs the system reliability based on pattern signatures functionality in supporting testing configuration, comparison, simulation, evaluation via wireless or mobile communication connectivity; second, by applying the

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capability of silent failure detection in supporting the system reliability process via online transaction processor as taught by Kanekawa in conjunction with the detecting and correlating of signatures of communication devices/systems as taught by Kasper, the silent failure detection system can enhance its operation performance, more specifically to ensuring the error thoroughly detected and corrected wirelessly or online process.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the computer/communication system operation availability and network/system performance therein with a mechanism to enhance the data connectivity, data debugging, data displaying, and data reliability.

As per claims 9-10:

Kasper further teaches:

- a telecommunications system that includes a call processing function, said operational characteristics comprising: call requests; and successful call requests (i.e., commands sending and acknowledgment, executing and process commands) [col. 2, par. 0017; col. 6, par. Claims 2 and 8];

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- a telecommunications system that includes a mobility function, said operational characteristics comprising: attempted handovers; successful handovers; and paging requests (i.e., wireless communications including keystrokes, reset, failure detection, etc...) [col. 2, par. 0002].

In addition, Kanekawa does explicitly disclose:

- A logic circuit error detection and correction in supporting the system reliability process [abstract, fig. 22, col. 1, lines 10-20] comprising

- computer devices/resources redundancies including processors, active/standby units in supporting the silent failure detection in supporting the system reliability process [col. 3, lines 6-34; col. 11, lines 43-59; col. 14, lines 42-48; and col. 22, lines 27-58].

As per claims 11-20:

Due to the similarity of claims 11-20 to claims 1-10 except for a system for detecting silent failures comprising MEANS for identifying an operational signature, MEANS for obtaining samples of operational service measurements, MEANS for comparing samples with operational signature, etc... instead of a method for

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detecting silent failures comprising STEPS for identifying an operational signature, STEPS for obtaining samples of operational service measurements, STEPS for comparing samples with operational signature, etc...; therefore, these claims are also rejected under the same rationale applied against claims 1-10. **In addition, all of the limitations have been noted in the rejection as per claims 1-10.**

As per claims 21-30:

These claims are the same as per claims 1-10. The only minor different is that these claims are directed to a **computer program product** instead of the a method for detecting silent failures comprising STES for identifying an operational signature, STEPS for obtaining samples of operational service measurements, STEPS for comparing samples with operational signature, etc... as described in claims 1-10. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to realize that a computer program product is a necessary item for such failure detection (i.e., silent failure) system. Since the computer failure detecting processing system obviously needs a means for instruction or code means resided within the computer program product for performing the signature identifying, comparing, and processing

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including the failure detection and correction (e.g., corrective measure). Therefore, these claims are also rejected under the same rationale applied against claims 1-10.

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can normally be reached on Monday - Thursday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The Tech Center 2100 phone number is (571) 272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DIEU-MINH THAI LE  
PRIMARY EXAMINER  
ART UNIT 2114**

DML

03/14/06